CLAIMS

1. A spectacle and contact lens selecting system comprising:

input means for inputting information related to a state of eyes of a user;

eyeball optical model deciding means for deciding an eyeball optical model corresponding to the information related to the state of the eyes input by the input means;

eyeball accommodation range determination means for examining optical performance of an eyeball within a range of accommodation of the user in the eyeball optical model decided by the eyeball optical model deciding means to determine the range of accommodation of the eyeball;

lens power selecting means for examining optical performance when the user wears spectacles or contact lenses to select a lens power; and

wearing state display means for generating and displaying a wearing state of the spectacles or the contact lenses to be selected.

2. The spectacle and contact lens selecting system according to claim 1, wherein

the input means is configured so as to allow the user to input information of the eyes of the user such as a wearing condition of the user, an age, a near point distance, a far

point distance, or a vision at a constant distance.

3. The spectacle and contact lens selecting system according to claim 1 or 2, wherein

the eyeball optical model deciding means comprises start eyeball optical model deciding means for deciding a start eyeball optical model based on the information of the eyes of the user such as an age and an approximated lens power.

4. The spectacle and contact lens selecting system set according to any one of claims 1 to 3, wherein

the eyeball optical model deciding means is configured so that a focal state in the eyeball of the user at an accommodation midpoint calculated from a near point distance and a far point distance of the user becomes optimal and/or a focal state in the eyeball of the user in a non-accommodative state calculated from the far point distance of the user becomes optimal.

5. The spectacle and contact lens selecting system according to any one of claims 1 to 4, further comprising eyeball optical model validity examination means for examining validity of the eyeball optical model at a limit of accommodation on a near point side and/or on a far point side.

6. The spectacle and contact lens selecting system according to any one of claims 1 to 5, wherein

the eyeball accommodation range determination means is configured to be able to determine a range of accommodation of

optical dimensions of the eyeball at an accommodation midpoint.

7. The spectacle and contact lens selecting system according to any one of claims 1 to 6, further comprising eyeball optical model image generating means for generating and displaying an image of an eyeball optical model in which the range of accommodation of the eyeball is determined.

8. The spectacle and contact lens selecting system according to any one of claims 1 to 7, further comprising eyeball optical model focal performance examination means for examining focal performance of the eyeball optical model at a near point or a position within a range of accommodation ability in the vicinity of the near point, at a far point or a position within the range of accommodation ability in the vicinity of the far point, or at a position away from the near point and the far point in a naked eye state of the user.

9. The spectacle and contact lens selecting system according to claim 8, wherein

the eyeball optical model focal performance examination means comprises means for examining a focal state of the eyeball optical model of the user at the near point or the position within the range of accommodation ability in the vicinity of the near point, at the far point or the position within the range of accommodation ability in the vicinity of the far point, or the position away from the near point and the far point after vision correction with the spectacles or

the contact lenses.

10. The spectacle and contact lens selecting system according to any one of claims 1 to 9, wherein

the spectacle and contact lens wearing state display means comprises sharpness score generating means for generating a sharpness score of visibility of the user before and/or after vision correction with the spectacles or the contact lenses.

11. The spectacle and contact lens selecting system according to any one of claims 1 to 10, further comprising viewed image generating means for generating an image to be viewed by the user before and/or after vision correction with the spectacles or the contact lenses.

12. The spectacle and contact lens selecting system according to any one of claims 1 to 11, wherein

the wearing state display means comprises: image acquisition means for acquiring an image of the user; and image synthesizing means for synthesizing an image of spectacles or contact lenses to be selected and the acquired image of the user.

13. A spectacle and contact lens selecting method comprising the steps of:

inputting information related to a state of eyes of a user;

deciding an eyeball optical model corresponding to the

information related to the state of the eyes input by the input step;

examining optical performance of an eyeball within a range of accommodation of the user in the eyeball optical model decided by the step of deciding the eyeball optical model, to determine the range of accommodation of the eyeball;

examining optical performance when the user wears spectacles or contact lenses to select a lens power; and

displaying a wearing state of the spectacles or the contact lenses to be selected.

14. The spectacle and contact lens selecting method according to claim 13, wherein

the input step comprises the step of inputting information of the eyes of the user such as a wearing condition of the user, an age, a near point distance, a far point distance, or a vision at a constant distance.

15. The spectacle and contact lens selecting method according to claim 13 or 14, wherein

the step of deciding the eyeball optical model comprises the step of deciding a start eyeball optical model based on the information of the eyes of the user such as an age and an approximated lens power.

16. The spectacle and contact lens selecting method according to any one of claims 13 to 15, wherein

the step of deciding the eyeball optical model comprises

the step of deciding the eyeball optical model so that a focal state in the eyeball of the user at an accommodation midpoint calculated from a near point distance and a far point distance of the user becomes optimal and/or a focal state in the eyeball of the user in a non-accommodative state calculated from the far point distance of the user becomes optimal.

17. The spectacle and contact lens selecting method according to any one of claims 13 to 16, further comprising the step of examining validity of the eyeball optical model at a limit of accommodation on a near point side and/or on a far point side.

18. The spectacle and contact lens selecting method according to any one of claims 13 to 17, wherein

the step of determining the range of accommodation of the eyeball comprises the step of determining a range of accommodation of optical dimensions of the eyeball at an accommodation midpoint.

19. The spectacle and contact lens selecting method according to any one of claims 13 to 18, further comprising the step of generating and displaying an image of an eyeball optical model in which the range of accommodation of the eyeball is determined.

20. The spectacle and contact lens selecting method according to any one of claims 13 to 19, further comprising the step of examining focal performance of the eyeball optical

model at a near point or a position within a range of accommodation ability in the vicinity of the near point, at a far point or a position within the range of accommodation ability in the vicinity the far point, or at a position away from the near point and the far point in a naked eye state of the user.

21. The spectacle and contact lens selecting method according to claim 20, wherein

the step of examining the focal performance of the eyeball optical model includes the step of examining a focal state of the eyeball optical model of the user at the near point or the position within the range of accommodation ability in the vicinity of the near point, at the far point or the position within the range of accommodation ability in the vicinity of the far point, or at the position away from the near point and the far point after vision correction with the spectacles or the contact lenses.

22. The spectacle and contact lens selecting method according to any one of claims 13 to 21, further comprising the step of generating a sharpness score of visibility of the user before and/or after vision correction with the spectacles or the contact lenses.

23. The spectacle and contact lens selecting method according to any one of claims 13 to 22, further comprising the step of generating an image to be viewed by the user

before and/or after vision correction with the spectacles or the contact lenses.

24. The spectacle and contact lens selecting method according to any one of claims 13 to 23, wherein

the step of generating and displaying the wearing state comprises: the step of acquiring an image of the user; and the step of synthesizing an image of spectacles or contact lenses to be selected and the acquired image of the user.